

AMENDMENTS TO THE CLAIMS

This Listing of Claims replaces all prior versions, and listings, of claims in this application.

1. (Currently Amended) A method comprising:
storing a configuration for a distributed environment, which includes a first node, in a central storage of the distributed environment; and
updating a portion of the configuration by the first node in the distributed environment, the first node separate from the central storage.
2. (Currently Amended) The method of Claim 1 wherein updating comprises:
acquiring a lock for the portion of the configuration ~~in~~ by the first node in the distributed environment;
modifying the portion of the configuration;
invalidating a representation of the portion of the configuration in the distributed environment; and
releasing the lock.
3. (Currently Amended) The method of Claim 2 wherein updating further comprises:
updating a database at the central storage to reflect modifications of a portion of the configuration; and
blocking reads of the configuration from the database during the updating.
4. (Currently Amended) The method of Claim 2 wherein updating further comprises:
notifying nodes in the distributed environment ~~of the~~ that the configuration has been updated ~~configuration data~~.
5. (Original) The method of Claim 2 wherein the lock is cluster wide.
6. (Currently Amended) The method of Claim 2 wherein updating further comprises:
writing changes to a shared database at the central storage.

7. (Original) The method of Claim 2 wherein modifying comprises:
changing a configuration object in a branch of a tree structure.
8. (Original) The method of Claim 2 wherein invalidating comprises:
sending a cache invalidation event to another node in the cluster.
9. (Original) The method of Claim 2 wherein invalidating comprises:
sending a message to a plurality of Java 2 Enterprise Edition (J2EE) nodes.
10. (Currently Amended) The method of Claim 2 wherein updating further comprises:
notifying a registered listeners-listener at a second node that the configuration has been changed, the second node separate from the first node and the central storage.
11. (Currently Amended) A system comprising:
a plurality of nodes each having ~~[[a]]~~ an instance of a configuration manager to maintain consistent storage of a configuration across the nodes without passing configuration modifications between the nodes;
a locking server shared by the plurality of nodes to coordinate access to the configuration;
and
a database management system to provide an interface with a shared relational database, the database to store the configuration.
12. (Currently Amended) The system of Claim 11 wherein the ~~configuring~~ configuration manager comprises:
a configuration cache; and
a configuration handler.
13. (Original) The system of Claim 12 wherein the configuration manager further comprises:
a persistency handler.
14. (Original) The system of Claim 11 further comprising:
a configuration handler to permit access to and modification of the configuration.
15. (Original) The system of Claim 11 wherein the configuration comprises:

a plurality of persistent objects holding information about a Java 2 enterprise edition cluster.

16. (Original) The system of Claim 15 wherein some of the persistent objects are cacheable.

17. (Original) The system of Claim 11 wherein the configuration manager comprises:
a change event listener to notify registered components of configuration change events.

18. (Currently Amended) A computer readable storage media containing executable computer program instructions which when executed cause a digital processing system to perform a method comprising:

storing a configuration for a distributed environment, which includes a first node, in a central storage of the distributed environment; and

updating a portion of the configuration by the first node in the distributed environment, the first node separate from the central storage.

19. (Currently Amended) The computer readable storage media of Claim 18 containing executable computer program instructions which when executed cause a digital processing system to perform the method wherein updating comprises:

acquiring a lock for the portion of the configuration ~~in~~ by the first node in the distributed environment;

modifying the portion of the configuration;

invalidating a representation of the portion of the configuration in the distributed environment; and

releasing the lock.

20. (Currently Amended) The computer readable storage media of Claim 19 containing executable computer program instructions which when executed cause a digital processing system to perform the method wherein updating comprises:

updating a database at the central storage to reflect modifications of a portion of the configuration; and

blocking reads of the configuration from the database during the updating.

21. (Currently Amended) The computer readable storage media of Claim 19 containing executable computer program instructions which when executed cause a digital processing system to perform the method wherein updating comprises:

notifying ~~node~~nodes in the distributed environment ~~of the current configuration data~~that the configuration has been updated.

22. (Currently Amended) The computer readable storage media of Claim 19 containing executable computer program instructions which when executed cause a digital processing system to perform the method wherein updating further comprises:

changing the configuration locally;

writing the changes to a shared database at the central storage; and

committing the changes.

23. (Original) The computer readable storage media of Claim 19 containing executable computer program instructions which when executed cause a digital processing system to perform the method wherein invalidating comprises:

sending a cache invalidation event to another node in the cluster.

24. (Currently Amended) The computer readable storage media of Claim 19 containing executable computer program instructions which when executed cause a digital processing system to perform the method wherein updating comprises:

notifying a registered listener at a second node~~listeners~~ that the configuration has been changed, the second node separate from the first node and the central storage.

25. (Original) A system comprising:

means for maintaining consistent storage of configuration information in a distributed environment;

means for controlling access to the configuration information; and

means for interfacing with a relational database system to provide persistent storage of the configuration information.

26. (Original) The system of Claim 25 wherein the configuration information comprises:
a plurality of persistent objects holding information about a Java 2 Enterprise Edition cluster.
27. (Original) The system of Claim 25 wherein the means for maintaining comprises:
a configuration cache resident in each node of the distributed environment; and
a configuration handler resident in each node of the distributed environment.